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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/595,644

05/02/2006

Hiroyuki Mori

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EXAMINER

LEA, CHRISTOPHER RAYMOND

ART UNIT

PAPER NUMBER

4161

MAIL DATE

DELIVERY MODE

06/04/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/595,644	Applicant(s) MORI ET AL.	
	Examiner Christopher R. Lea	Art Unit 4161	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>05/02/06</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

This application is a 371 (national stage application) of PCT/JP04/16779 filed 11/05/2004, which claims foreign priority to Japanese Patent 2003-378135 filed 11/07/2003.

Claims 1-6 are pending.

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

2. The information disclosure statement filed 05/02/2006 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document; each non-patent literature publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein has not been considered.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

Art Unit: 4161

1. Determining the scope and contents of the prior art.
 2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
5. Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Akita (Japanese Patent 08-302080) in view of Cannelongo (US Patent number 6,193,990) and Bradt (US Patent number 5,627,218).

Applicant claims a two-layer resin pellet in a core/sheath (annular) arrangement wherein the core comprises an insecticide, inorganic filler, metal soap, and a polymer, in which the insecticide is high soluble, and the sheath comprises a polymer in which the insecticide is poorly soluble. Applicant claims the insecticide be a pyrethroid type insecticide. Applicant further claims the mix-melted and melt-spun products of these pellets.

Determination of the scope and content of the prior art

(MPEP 2141.01)

Akita (Japanese patent 08-302080, using the machine translation) teaches, as a whole, a composition containing two types of resins and an insecticide. Note that the terms resin and polymer are used interchangeably below.

Claims 1 and 3: Akita teaches an olefin-based resin composition comprising an insecticide and two polymers (claim 1), one with high solubility (low density polyethylene, LDPE, paragraph 17) and one with low solubility for the insecticide (high density polyethylene, HDPE, paragraph 16). Akita further teaches other additives in the

resin composition such as inorganic fillers, pigments, dispersants, etc (paragraph 23).

Claim 2: Akita teaches insecticides of the pyrethroid type (claim 1).

Claim 4: Akita teaches a weight ratio of high solubility polymer to low solubility polymer of 4:1 to 1:10 (claim 1), which overlaps with the instant claimed range of 10:1 to 1:5.

Claim 5: Akita teaches an insecticidal resin composition that contains a range of 4:1 to 1:10 for ratios of high solubility to low solubility polymer. The instant claim contains a range of 1:1 to 15 ratio of combination pellet to low solubility polymer. The instant range converts to ~1:1 to 1:95 high solubility to low solubility polymer, which overlaps with the range taught by Akita.

Claim 6: Akita teaches that the insecticidal resin composition may be extruded (paragraph 24). The examiner's position is that melt-spinning is a form of extrusion.

Ascertainment of the difference between the prior art and the claims

(MPEP 2141.02)

The difference between the instant application and Akita is that Akita does not expressly teach a metal soap being added to the resin composition. This deficiency in Akita is cured by the teachings of Cannelongo (US Patent number 6,193,990).

Cannelongo teaches, as a whole, an extrudable pesticide resin.

Claims 1-6: Cannelongo teaches adding an inorganic filler (such as barium sulfate) and a metal soap (such as zinc stearate) to the resin composition (column 7, lines 29-39).

Claim 3: Cannelongo teaches a composition with insecticide to filler ratio of about 1:3 (examples 1-3, columns 10-12), and though this is outside the instant claimed range of 1:2 to 4:1, they are close enough that one skilled in the art would have expected them to have the same properties (MPEP §2144.05). Cannelongo additionally teaches a ratio of insecticide to metal soap of about 17:1 to 3:1 (examples 1-2, columns 10-11) which is inside the instant claimed range of 20:1 to 1:1. Cannelongo further teaches a ratio of insecticide and filler to resin in the range of 2:1 to 5:1 (examples 1-5, columns 10-12) which is inside the instant claimed range of 1:5 to 5:1.

The difference between the instant application and Akita is that Akita does not expressly teach a pellet containing strata in an annular arrangement. This deficiency in Akita is cured by the teachings of Bradt (US Patent number 5,627,218).

Bradt teaches, as a whole, a method for producing compartmentalized thermoplastic pellets to be melt-mixed into a moldable plastic.

Claims 1-4: Bradt teaches two-layered pellets having strata in a concentric annular arrangement (column 2 lines 18-39). Bradt further teaches that the strata may contain different polymers, e.g., a polyester and polystyrene (column 6 line 28-36).

Finding of *prima facie* obviousness

Rationale and Motivation (MPEP 2142-2143)

It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to combine the metal soap of Cannelongo and the pelleting

method of Bradt to the insecticidal resin composition of Akita and produce the instant invention.

One of ordinary skill in the art would have been motivated to do this because Cannelongo teaches that resin pellets used to make insecticidal resin compositions often have toxicant pesticide stuck to their exterior (column 6, lines 15-23 and 50-58). One of ordinary skill in the art would recognize that environmental exposure to these toxicant particles is not desired. This problem can be solved by using the method of Bradt to make pellets that contain an insecticide core and a protective outer sheath, thereby minimizing environmental exposure to the insecticide while in an intermediate state. One of ordinary skill in the art would have been motivated to use Bradt in this way because Bradt teaches that the multi-layered resin pellet forms "do not rub off or separate to contaminate storage units, conveying devices of feed hoppers."

A reference is good not only for what it teaches by direct anticipation but also for what one of ordinary skill in the art might reasonably infer from the teachings. (*In re Opprecht* 12 USPQ 2d 1235, 1236 (Fed Cir. 1989); *In re Bode* 193 USPQ 12 (CCPA) 1976).

In light of the forgoing discussion, one of ordinary skill in the art would reasonably conclude that the subject matter defined by the instant claims would have been obvious within the meaning of 35 USC 103(a).

From the teachings of the references, it is apparent that one of ordinary skill in the art would have had a reasonable expectation of success in producing the claimed invention. Therefore, the invention as a whole was *prima facie* obvious to one of

ordinary skill in the art at the time the invention was made, as evidenced by the references, especially in the absence of evidence to the contrary.

Conclusion

No claims allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher R. Lea whose telephone number is (571)270-5870. The examiner can normally be reached on Monday-Thursday 7:30-5:00 ET.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Nolan can be reached on 571-272-0847. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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CRL

/Patrick J. Nolan/

Supervisory Patent Examiner, Art Unit 4161